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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,725	07/28/2003	Ho-Jin Kweon	1567.1007-D	7093

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EXAMINER	
CREPEAU, JONATHAN	
ART UNIT	**PAPER NUMBER**
1746	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,725	KWEON ET AL.	
	Examiner	Art Unit	
	Jonathan S. Crepeau	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action addresses claims 11-24. The claims remain rejected under 35 USC 102 and 103 for the reasons of record. Additionally, the claims are newly rejected under 35 USC 112, first and second paragraphs as necessitated by amendment. Accordingly, this action is made final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 11-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 11 has been amended to recite that the coated compound is dried "at a temperature where a conversion of a precursor to oxide occurs, without heat-treating the coated compound." However, it is submitted that the instant specification only provides support for a process wherein a conversion to oxide does *not* occur (see page 15, line 8). Therefore, it is

submitted that the claim language should be amended to specify that the drying temperature is *lower* than that at which the oxide forms, or simply that an oxide is not formed during drying. The claim will be interpreted in this manner herein.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of claim 11 noted above causes confusion because it appears that Applicants are attempting to claim that an oxide is not formed; however, the claim recites the opposite of this. Furthermore, the limitation regarding the lack of heat-treatment appears to be extraneous, since it is understood that heat treatment is tantamount to conversion to oxide (specification, page 15).

Claim Rejections - 35 USC § 102

6. Claims 11-20 are rejected under 35 U.S.C. 102(a) or (e) as being anticipated by Kweon et al (U.S. Patent 6,183,911). The reference is directed to methods of making an active material comprising a lithiated core material and a vanadium pentoxide coating thereon (see col. 1, line 25 and line 35). The vanadium pentoxide may be applied via an organic solution or an aqueous

solution, either of which may be refluxed (see col. 2, line 41). The weight percentage of the vanadium oxide in the solution may be 0.1-30 wt%. Thus, the instant claims are anticipated.

7. Claims 11, 12, 15, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang (U.S. Patent 5,783,328). The reference is directed to methods of making an active material comprising a lithiated manganese oxide core material and a lithium or cobalt-containing coating thereon (see abstract). The active material is made by adding the lithium manganese oxide to an aqueous cobalt or lithium compound solution, mixing, heating the solution to evaporate the water, and then heat-treating (i.e., drying) the product in a carbon dioxide atmosphere. Thus, the instant claims are anticipated.

Claim Rejections - 35 USC § 103

8. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang.

The reference is applied to claims 11, 12, 15, 17, and 18 for the reasons stated above. Furthermore, regarding claim 21, the heating of the solution to evaporate the water can be characterized as "continuously increasing the temperature within the mixer." However, the reference does not expressly teach that the lithiated compound and the solution are "injected" into the mixer as recited in claim 21, or that the blowing gas (carbon dioxide) is injected into the

mixer as recited in claim 22, or that the coating step is performed under vacuum as recited in claim 23. The reference also does not expressly teach a sieving step as recited in claim 24.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to sieve the active material of Wang in order to obtain an appropriate particle size. As such, this limitation is not considered to distinguish over the reference.

Furthermore, the limitation that that the lithiated compound and the solution are "injected" into the mixer is not considered to distinguish over the reference. It would be obvious to employ any method that would result in sufficient mixing of the lithiated compound and the coating solution. As such, the limitation that these materials are "injected" into the mixer would be obvious to a skilled artisan.

Regarding the limitation that the blowing gas (carbon dioxide) is injected into the mixer as recited in claim 22, this limitation is also not considered to distinguish over the reference. No substantive difference is seen in performing the heat treatment with the gas outside the mixer, as disclosed in the reference, or within the mixer, as claimed. As such, the subject matter of claim 22 would also be rendered obvious.

Regarding the limitation that the coating step is performed under vacuum as recited in claim 23, this step would also be well within the skill of the art to perform in the method of Wang. It is known that lithiated compounds are sensitive to moisture in the air, and as such, the execution of the mixing step in an inert or evacuated atmosphere is considered to be within the skill of the art.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 11-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of U.S. Patent Nos. 6372385, 6183911, 6756155, 6531220, 6653021, 6753111, 6797435, and 6846592. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the above patents anticipate at least instant claim 11.

11. Claims 11-20 and 24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application Nos. 09/429262, 09/963872, 09/966572, 10/808034, and 10/944892. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the above patents anticipate at least instant claim 11.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

12. Applicant's arguments filed January 20, 2006 have been fully considered but they are not persuasive. Applicants essentially argue that both Wang and Kweon disclose heat-treatment steps, which is excluded by the language in claim 11. However, as disclosed in the instant specification, "heat-treatment" simply means that a conversion to oxide occurs. As a conversion to oxide does *not* occur in either Wang or Kweon, these references are still considered to meet the claim language. In Kweon, vanadium oxide is already present in the precursor and thus no further formation of oxide occurs during drying, thus meeting the claim language (it is noted that the claims do not positively specify the composition of the surface layer; they merely recite that an oxide is not formed during drying). In the Wang reference, a carbonate is formed upon drying, and thus meets the claim limitations that no oxide is formed and no heat-treatment is performed (since heat-treatment essentially means no oxide formation). As such, the references are still believed to properly applicable to the claims. Amendments to overcome the 35 USC 112 issues will be considered for entry after final rejection, but amendments making further changes in claim scope will not be entered as a matter of right.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

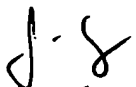
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1746
March 29, 2006